

Appeal from a decision of the Wyoming State Office, Bureau of Land Management, increasing the annual rental for noncompetitive oil and gas lease. W-73675.

Affirmed.

1. Oil and Gas Leases: Known Geologic Structure--Oil and Gas Leases: Rentals

BLM may properly require the holder of a noncompetitive oil and gas lease to pay an increased rental of \$2 per acre for the entire leasehold pursuant to 43 CFR 3103.2-2(d), where BLM determines during the lease term that any part of the lands included in the lease is within a known geologic structure.

2. Oil and Gas Leases: Known Geologic Structure

A BLM determination that land leased for oil and gas is within a known geologic structure will not be overturned where geologic evidence that the land is underlain by producing structures is not challenged by an appellant.

APPEARANCES: Judy P. Clifton, pro se; Lowell L. Madsen, Esq., Office of the Regional Solicitor, U.S. Department of the Interior, Denver, Colorado, for the Bureau of Land Management.

OPINION BY ADMINISTRATIVE JUDGE FRAZIER

Judy P. Clifton has appealed from a decision dated December 20, 1985, by the Wyoming State Office, Bureau of Land Management (BLM), increasing the annual rental for appellant's noncompetitive oil and gas lease (W-73675) from \$1 to \$2 per acre or fraction thereof because "all or part of the lands" in the lease had been determined to be within the Salt Wells Known Geologic Structure (KGS).

Appellant's lease embraces 6,799.16 acres in T. 14 N., R. 101 W., sixth principal meridian, Sweetwater County, Wyoming. By memorandum dated October 5, 1984, the District Manager, Rock Springs District Office, informed the Wyoming State Director that, based on oil and gas development, portions of the lease acreage were situated within an undefined addition to the Salt

Wells defined KGS effective July 12, 1984. In its decision, BLM increased the rental rate from \$1 to \$2 "[b]eginning with the lease year which starts at least 30 days from your receipt of this notice, and for each year thereafter."

The Salt Wells KGS and undefined addition cover lands in Sweetwater County, Wyoming. At least four gas-producing formations have been identified by BLM within this KGS: the Dakota, Frontier, Baxter, and Rock Springs Formations. Of these, the Frontier Formation is the most widespread and prolific gas producer. Also, the Rock Springs Formation contains up to six separate sand intervals, all of which either produce gas or had a significant gas show locally across the structure. BLM relied exclusively on geologic data concerning the Frontier and Rock Springs Formations in deciding to make this undefined addition to the KGS:

The boundaries of the undefined addition to the Salt Wells KGS were determined based on the net effective reservoir zero-foot isopach lines calculated for each of the producing formations described above (refer to attached Net Effective Reservoir Isopach Maps). Isopach maps for the Blair and the Dakota Formations were not included with this report as the areal extent of the productive intervals of these formations falls within the zero-foot isopach line of the Frontier Formation. The net effective reservoir is defined as a subsurface thickness of rock that has sufficient porosity to permit the accumulation of crude oil or natural gas under adequate trap conditions, and is presumptively productive for oil or gas. The zero-foot net effective reservoir isopach line essentially outlines the limits of the trap, be it structural, stratigraphic, or a combination of both types. The net effective reservoir thickness was calculated for each well in the Salt Wells area by using any one, or multiple combinations of the following: reports of operation, completion reports, production tests, drill stem tests (refer to attachment 1), IWR's, well logs (electric/ induction logs, sonic logs, nuclear/density logs, temperature logs, and other miscellaneous logs as available), P.I. data, and other published and unpublished literature.

(BLM KGS Report, July 12, 1984). These data were summarized by BLM on its net effective reservoir isopach maps for the Frontier and Rock Springs Formations, which have been filed along with its KGS report. 1/

[1] It is well established that when BLM has determined that any part of the lands described in a noncompetitive oil and gas lease is within an addition to a KGS, the lessee is properly required by BLM to pay an increased annual rental of \$2 per acre for the entire leasehold pursuant to 43 CFR

1/ BLM also prepared a KGS report in connection with its Oct. 5, 1984, decision to include additional lands in neighboring townships in another undefined addition to the Salt Wells KGS. BLM has also filed this KGS report with us, and it includes a net effective reservoir isopach map for the Dakota Formation.

3103.2-2(d). Lewis & Clark Exploration Co., 97 IBLA 171 (1987). Thus, if BLM's determination that part of the lands in appellant's lease were within a KGS is correct, the rental was properly increased.

Appellant contends that BLM should not have included anypart of her oil and gas lease within the undefined addition to the Salt Wells KGS. She states that the Grynberg & Associates 42X-16 State Well in sec. 16 of T. 14 N., R. 101 W., was completed as a dry hole in 1975, and was tested, plugged, and abandoned in 1977. Appellant alleges that there has been no production and no additional wells drilled in this township since 1977. BLM's KGS designation is questionable also, appellant contends, in light of the fact that parcel No. 118 (also in T. 14 N., R. 101 W.) was offered at a 1985 competitive sale and received no bids.

In addition to the geologic report prepared by BLM when it made its KGS determination, BLM's Answer includes a geologic report responding to appellant's statement of reasons. This report stated that the Grynberg & Associates 42X-16 State Well was in fact designated a dry hole in February 1980. Nonetheless, the report indicates, there were significant drill stem tests (DST's) on this well. One such test, the Blair Formation DST No. 1, had extremely favorable gas shows of 1,500 to 2,200 MCF per day. According to BLM, on the basis of this test, Phoenix Resources reentered the well in 1977 and unsuccessfully attempted a completion in the Blair Formation. BLM's records do not indicate why the attempt was abandoned.

In any event, notwithstanding the results of these DST's, BLM did not consider the Blair Formation during its KGS determination study. BLM's report states that "the Blair Formation does not produce commercially anywhere in the immediate area of [T. 14 N., R. 101 W.]; therefore, there is very limited data concerning the extent of the presumptively productive reservoir in this formation." Rather, BLM relied on the Frontier and Rock Springs Formations, which did produce commercially in a number of wells in T. 14 N., R. 102 W. In 1975, Mountain Fuel Supply drilled a well in sec. 18 of T. 14 N., R. 101 W., which produced a small gas showing from the Frontier Formation. According to BLM, this showing "indicates that the Frontier Formation reservoir at this location is gas-bearing and presumptively productive." The report refers to "continuity of the hydrocarbon reservoir" between the above two wells and the commercially producing Chambers 2-11 well in the SW<sup>^</sup> SW<sup>^</sup> of sec. 11, T. 14 N., R. 102 W. This well produces from perforations in three Frontier sand zones. By means of cross sections, BLM shows "a clear correlation of the Frontier sands zones" between the wells. Attached to BLM's report is an isopach map interpreting thickness and extent of the Frontier Formation reservoir in T. 14 N., R. 101 W.

The report notes further that a portion of the KGS Boundary is also based on analyses of the Rock Springs Formation. "DST results from this formation in various wells within the township indicate that the 'commercially' productive Rock Springs reservoir in T. 14 N., R. 102 W. is present, and will produce hydrocarbons in various quantities in T. 14 N., R. 101 W." BLM notes that its conclusions are based on a "thorough evaluation of the available well log and test data."

[2] This Board has previously held that an appellant challenging a KGS determination has the burden of proving by a preponderance of the evidence that the KGS determination is in error. Bender v. Clark, 744 F.2d 1424 (10th Cir. 1984); Lewis & Clark Exploration Co., *supra*.

A KGS is defined as "technically the trap in which an accumulation of oil or gas has been discovered by drilling and determined to be productive, the limits of which include all acreage that is presumptively productive." 43 CFR 3100.0-5(1). A KGS designation recognizes the existence of a continuous entrapping structure on some part of which there is production. Lloyd Chemical Sales, Inc., 82 IBLA 182 (1984). Accordingly, it is not necessary that there be production within or in the immediate vicinity of land designated as part of a KGS, as long as the land is determined to be "presumptively productive" on the basis of geologic evidence of the existence of a productive structure underlying the land. R. K. O'Connell, 85 IBLA 29 (1985). An appellant challenging such a determination must either show that the producing structure does not underlie the land or affirmatively establish, as a fact, that the land involved is not productive from the structure in question. It is well established that this Board may rely on reports of the Secretary's technical experts. A determination by Departmental technical experts will normally not be set aside where it is not arbitrary or capricious, and is supported by competent evidence. Thunderbird Oil Corp., 91 IBLA 195, 202 (1986), and cases there cited.

BLM's geologic reports demonstrate that a portion of the land embraced by appellant's lease is presumptively productive based on the existence of geologic structures underlying the land. Apart from her reference to the Grynberg & Associates 42X-16 State Well "dry hole" (which BLM has amply explained), appellant has not challenged BLM's findings with a proffer of her own geologic evidence. Therefore, appellant has not met her burden of proving that the KGS determination is in error.

Appellant has observed that BLM had offered another parcel in the same township for competitive lease but had received no bids for it. However, a lack of interest on the part of bidders at competitive sales in a certain parcel offered at a competitive oil and gas lease sale is not indicative of fair market value of such parcel for oil and gas, because unrelated factors, such as limited financial resources or lack of significant data, have a bearing on the number of bids received. I. K. Rosen, 94 IBLA 202, 207 (1986). Nor should an historic lack of competitive interest in a parcel adversely reflect on the oil and gas prospects of other parcels in the vicinity. In any event, a lack of competitive interest in an area is simply not a criterion for determining whether a parcel within the area may be included in a KGS. See 43 CFR 3100.0-5(1); compare 43 CFR 3200.0-5(k) (establishing competitive interest as a criterion for establishing a known geothermal resource area).

Therefore, pursuant to the authority delegated to the Board of Land Appeals by the Secretary of the Interior, 43 CFR 4.1, the decision appealed from is affirmed.

---

Gail M. Frazier  
Administrative Judge

I concur:

---

David L. Hughes  
Administrative Judge